

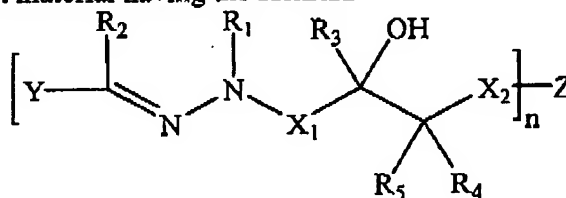
Application No. 10/749,418

SUMMARY OF THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Original) An organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:

(a) a charge transport material having the formula



where n is an integer between 3 and 6;

R₁ and R₂ are, each independently, H, an alkyl group, an alkenyl group, an aromatic group, or a heterocyclic group;

R₃, R₄, and R₅ are, each independently, H, thiol, hydroxyl, carboxyl, an amino group, a halogen, nitro, cyano, an alkyl group, an alkenyl group, an aromatic group, a heterocyclic group, or a part of a ring group;

X₁ and X₂ are, each independently, a linking group;

Y comprises an arylamine group; and

Z is a bridging group; and

(b) a charge generating compound.

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2. (Original) An organophotoreceptor according to claim 1 wherein Y comprises a carbazole group, a julolidine group, or an (N,N-disubstituted)arylamine group.

3. (Previously Presented) An organophotoreceptor according to claim 1 wherein X_1 and X_2 , each independently, comprise a $-(CH_2)_m-$ group, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, N, C, B, P, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, an NR_6 group, a CR_7 , or a CR_8R_9 group where R_6 , R_7 , R_8 , and R_9 are, each independently, H, hydroxyl, thiol, carboxyl, an amino group, an alkyl group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring.

4. (Original) An organophotoreceptor according to claim 3 wherein X_1 is a methylene group and R_3 , R_4 , and R_5 are each independently an H.

5. (Previously Presented) An organophotoreceptor according to claim 1 wherein Z comprises a $-(CH_2)_p-$ group, branched or linear, where p is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, N, C, B, P, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, an NR_{10} group, a CR_{11} , or a $CR_{12}R_{13}$ group where R_{10} , R_{11} , R_{12} , and R_{13} are, independently, H, hydroxyl, thiol, carboxyl, an amino group, an alkyl group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring group.

6. (Original) An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a second charge transport material.

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7. (Original) An organophotoreceptor according to claim 6 wherein the second charge transport material comprises an electron transport compound.

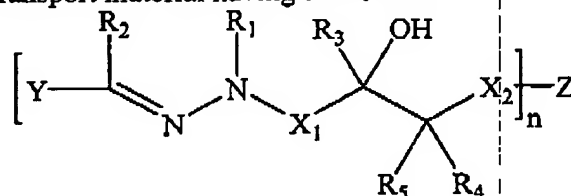
8. (Original) An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a binder.

9. (Original) An electrophotographic imaging apparatus comprising:

(a) a light imaging component; and

(b) an organophotoreceptor oriented to receive light from the light imaging component, the organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:

(i) a charge transport material having the formula



where n is an integer between 3 and 6;

R₁ and R₂ are, each independently, H, an alkyl group, an alkenyl group, an aromatic group, or a heterocyclic group;

R₃, R₄, and R₅ are, each independently, H, thiol, hydroxyl, carboxyl, an amino group, a halogen, nitro, cyano, an alkyl group, an alkenyl group, an aromatic group, a heterocyclic group, or a part of a ring group;

X₁ and X₂ are, each independently, a linking group;

Y comprises an arylamine group; and

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Z is a bridging group; and

(ii) a charge generating compound.

10. (Original) An electrophotographic imaging apparatus according to claim 9 wherein Y comprises a carbazole group, a julolidine group, or an (N,N-disubstituted)arylamine group.

11. (Previously Presented) An electrophotographic imaging apparatus according to claim 9 wherein X_1 and X_2 , each independently, comprise a $-(CH_2)_m-$ group, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, N, C, B, P, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, an NR_6 group, a CR_7 , or a CR_8R_9 group where R_6 , R_7 , R_8 , and R_9 are, each independently, H, hydroxyl, thiol, carboxyl, an amino group, an alkyl group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring group.

12. (Original) An electrophotographic imaging apparatus according to claim 11 wherein X_1 is a methylene group and R_3 , R_4 , and R_5 are each independently an H.

13. (Previously Presented) An electrophotographic imaging apparatus according to claim 9, wherein Z comprises a $-(CH_2)_p-$ group, branched or linear, where p is an integer between 1 and 20, inclusive, and one or more of the methylene groups is replaced by O, S, N, C, B, P, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, an

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NR₁₀ group, a CR₁₁, or a CR₁₂R₁₃ group where R₁₀, R₁₁, R₁₂, and R₁₃ are, independently, H, hydroxyl, thiol, carboxyl, an amino group, an alkyl group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring group.

14. (Original) An electrophotographic imaging apparatus according to claim 9 wherein the photoconductive element further comprises a second charge transport material.

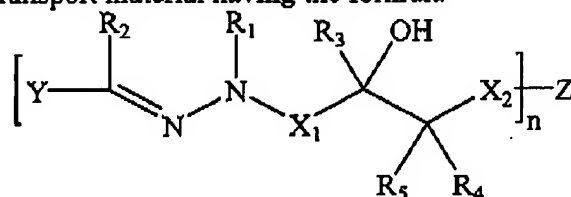
15. (Original) An electrophotographic imaging apparatus according to claim 14 wherein second charge transport material comprises an electron transport compound.

16. (Original) An electrophotographic imaging apparatus according to claim 9 further comprising a toner dispenser.

17. (Original) An electrophotographic imaging process comprising;

(a) applying an electrical charge to a surface of an organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising

(i) a charge transport material having the formula



where n is an integer between 3 and 6;

R₁ and R₂ are, each independently, H, an alkyl group, an alkenyl group, an aromatic group, or a heterocyclic group;

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R₃, R₄, and R₅ are, each independently, H, thiol, hydroxyl, carboxyl, an amino group, a halogen, nitro, cyano, an alkyl group, an alkenyl group, an aromatic group, a heterocyclic group, or a part of a ring group;

X₁ and X₂ are, each independently, a linking group;

Y comprises an arylamine group; and

Z is a bridging group; and

(ii) a charge generating compound.

(b) imagewise exposing the surface of the organophotoreceptor to radiation to dissipate charge in selected areas and thereby form a pattern of charged and uncharged areas on the surface;

(c) contacting the surface with a toner to create a toned image; and

(d) transferring the toned image to substrate.

18. (Original) An electrophotographic imaging process according to claim 17 wherein Y comprises a carbazole group, a julolidine group, or an (N,N-disubstituted)arylamine group.

19. (Previously Presented) An electrophotographic imaging process according to claim 17 wherein X₁ and X₂, each independently, comprise a -(CH₂)_m- group, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, N, C, B, P, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, an NR₆ group, a CR₇, or a CR₈R₉ group where R₆, R₇, R₈, and R₉ are, independently, H, hydroxyl, thiol, carboxyl, an amino group, an alkyl group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring group.

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20. (Original) An electrophotographic imaging process according to claim 19 wherein X_1 is a methylene group and R_3 , R_4 , and R_5 are each independently an H.

21. (Previously Presented) An electrophotographic imaging process according to claim 17 wherein Z comprises a $-(CH_2)_p$ group, branched or linear, where p is an integer between 1 and 20, inclusive, and one or more of the methylene groups is replaced by O, S, N, C, B, P, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, an NR_{10} group, a CR_{11} , or a $CR_{12}R_{13}$ group where R_{10} , R_{11} , R_{12} , and R_{13} are, independently, H, hydroxyl, thiol, carboxyl, an amino group, an alkyl group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring group.

22. (Original) An electrophotographic imaging process according to claim 17 wherein the photoconductive element further comprises a second charge transport material.

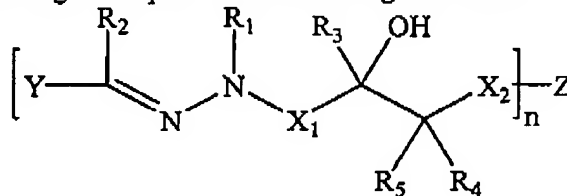
23. (Original) An electrophotographic imaging process according to claim 22 wherein the second charge transport material comprises an electron transport compound.

24. (Original) An electrophotographic imaging process according to claim 17 wherein the photoconductive element further comprises a binder.

25. (Original) An electrophotographic imaging process according to claim 17 wherein the toner comprises a toner comprising colorant particles.

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26. (Original) A charge transport material having the formula



where n is an integer between 3 and 6;

R₁ and R₂ are, each independently, H, an alkyl group, an alkenyl group, an aromatic group, or a heterocyclic group;

R₃, R₄, and R₅ are, each independently, H, thiol, hydroxyl, carboxyl, an amino group, a halogen, nitro, cyano, an alkyl group, an alkenyl group, an aromatic group, a heterocyclic group, or a part of a ring group;

X₁ and X₂ are, each independently, a linking group;

Y comprises an arylamine group; and

Z is a bridging group.

27. (Original) A charge transport material according to claim 26 wherein Y comprises a carbazole group, a julolidine group, or an (N,N-disubstituted)arylamine group.

28. (Previously Presented) A charge transport material according to claim 26 wherein X₁ and X₂, each independently, comprise a $-(\text{CH}_2)_m-$ group, branched or linear, where m is an integer between 1 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, N, C, B, P, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, an NR₆ group, a CR₇, or a CR₈R₉ group where R₆, R₇, R₈, and R₉ are, independently, H, hydroxyl, thiol, carboxyl, an amino group, an alkyl group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring group.

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29. (Original) A charge transport material according to claim 28 wherein X_1 is a methylene group and R_3 , R_4 , and R_5 are each independently an H.

30. (Previously Presented) A charge transport material according to claim 26 wherein Z comprises a $-(CH_2)_p-$ group, branched or linear, where p is an integer between 1 and 20, inclusive, and one or more of the methylene groups is replaced by O, S, N, C, B, P, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, an NR_{10} group, a CR_{11} , or a $CR_{12}R_{13}$ group where R_{10} , R_{11} , R_{12} , and R_{13} are, independently, H, hydroxyl, thiol, carboxyl, an amino group, an alkyl group, an alkenyl group, a heterocyclic group, an aromatic group, or part of a ring group.

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